



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3179-041
Job Sheet 174175



Part No: D3179-041

Job Qty: 6 ea

Part Name: Litter Tie Down (Non-Locking)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/12/18

Job Tracking No:

Due Date: 3/30/18

Created By: Linda Lacelle

Type: Stock *SOLD*

Description:

Note: DWG REV E IPP A1 03.01.09 Added Acid etch end alodine RF IPP Rev:B Added Powder Coat 07-07-04 JLM
IPP REV:C AS PER REV D JLM 13-05-24 VERIFIED BY:DD IPP Rev:C 08-12-10 add part list DD verified by:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea	3/29/18	3/29/18	0.00	0.00	Start Up Machining-1		<i>SBZ 18/04/11</i>
100	Bandsaw	6 pcs	3/29/18	3/29/18	0.00	0.50	Bandsaw1		<i>SBZ 18/04/11</i>
110	CNC Vertical Machining	6 pcs	3/29/18	3/29/18	0.37	10.91	HAAS1-3		<i>SBZ 18/04/11</i>
120	QC	6 pcs	3/29/18	3/29/18	0.00	0.00	QC2 Machining-1		<i>SBZ 18/04/11</i>
130	QC	6 pcs	3/29/18	3/29/18	0.00	0.00	QC8 Machining-1		<i>SBZ 18/04/11</i>
140	HandFinish	6 pcs	3/29/18	3/29/18	0.00	0.49	HandFinish1		<i>SA 18-04-12</i>
150	QC	6 pcs	3/29/18	3/29/18	0.00	0.00	QC7-2		<i>SA 18-4-12</i>
160	Powdercoat	6 pcs	3/29/18	3/29/18	0.00	0.36	Powdercoat1		<i>SA 18-4-12</i>
170	QC	6 pcs	3/29/18	3/29/18	0.00	0.00	QC3		<i>SA</i>
180	Small Fab	6 pcs	3/30/18	3/30/18	0.00	0.89	Small Fab-3		<i>MULDAS</i>
190	QC	6 pcs	3/30/18	3/30/18	0.00	0.00	QC5		<i>38</i>
200	Packaging	6 pcs	3/30/18	3/30/18	0.00	0.00	Packaging3-1	<i>ST225</i>	<i>APR 13 2018</i>
210	QC21-SA	6 Ea	3/30/18	3/30/18	0.00	0.00	QC21		<i>APR 13 2018</i>

Part Op 100 - Cut blanks: 12.150" long
Descriptions: 110 - 1- Mill as per Folio FA297 Rev: & Dwg D3179-1 Rev:

160 - START TIME: *11:30*

180 - Assemble as per Dwg D3179

AT 11:30 FINISH 12:00 M135760
Open 2 hole drill bit #D

DAS 21

APR 13 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6201	T Extrusion	6,0750 ft (1.0125 ea)	90-Start up Operation	
D2372 <i>117</i>	Quick Release	12 Ea (2 ea)	180-Small Fab	
D2444 <i>127</i>	Pip Pin Assembly	6 Ea (1 ea)	180-Small Fab	
MS21042L3 <i>11</i>	Nut	6 Ea (1 ea)	180-Small Fab	
MS27039-1-13 <i>1280</i>	Screw	6 Ea (1 ea)	180-Small Fab	
NAS1149D0332J <i>19</i>	Washer	18 Ea (3 ea)	180-Small Fab	

5 F 125654
5054107
5020606

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		☐

Date : _____ Step #: _____ IOTV Effective : _____ MRB (QSI042) Approval _____

Description Work Order Deviation

Dart Aerospace Ltd.
1270 Aberdeen Street
Newbury, ON K64 1K7
CANADA
TEL: 813 832-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 04/11/18



Container No: S059838

Part: D3179-041

Job No: 174175

Serial No/Batch: S059838

Revision:
Inspector:

Root Cause			
Environment	☐	No Re-verification	☐
Design	☐	Operator	☐
Doc/Data	☐	Offset/Setup	☐
Equip/Tooling	☐	Supplier	☐
Handling/Pre	☐	Training	☐
Material	☐	Use for Testing	☐
Internal Transport	☐	Poor Information	☐
Tribal Knowledge	☐	Rushing	☐
LOA	☐	Product Improvement	☐
Substation	☐	Process Improvement	☐
Past Expiry Date	☐	Manufacturing Process	☐
Misidentified	☐	Past Due	☐
		Pressure/Forced	☐
		Bending	☐
		Centre Not Concentric	☐
		Cracks	☐
		Crimp/Kink/Ripple/Wave	☐
		Cuffs	☐
		Crushing	☐
		Heat Treat	☐
		Wave/Twist in Tube	☐
		Marks/Chatter	☐
		Inspection Incomplete/Unqualified	☐
		Contamination	☐
		Countersink	☐
		Cut Too Short	☐
		Instructions Incomplete/Unclear	☐
		Drill Holes	☐
		Wrong Stock Used	☐
		Out of Sequence	☐
		Off-set	☐
		Mislabeled	☐
		Fit/Function	☐
		Misaligned/off center	☐
		Part Moved	☐
		Drawing	☐
		Finish	☐
		Misread	☐
		Turning Sequence	☐
OTHER : _____			

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation 180-Small Fab	D6201	6	25	0
	D2372	12	41	0
	D2444	6	8	0
	MS21042L3	6	3,144	0
	MS27039-1-13	6	397	0
	NAS1149D0332J	18	3,596	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART AEROSPACE LTD		Work Order:	174175
Description: Fwd Litter Tie Down Bracket		Part Number:	D3179-1
Inspection Dwg: D3179 Rev: E		Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	1.001	✓		Vern.	
R0.40	+/-0.030	.400	✓		R.G.	
R0.38	+/-0.030	.380	✓		R.G.	
1.70	+/-0.030	1.700	✓		H.G.	
Ø0.191	+0.005/-0.001	.193	✓		P.G.	
10.500	+/-0.010	10.500	✓		H.G.	
4.250	+/-0.010	4.250	✓		VERN	
Ø0.246	+0.005/-0.001	.246	✓		P.G.	
1.50	+/-0.030	1.500	✓		Vern	
0.750	+/-0.010	.750	✓		"	
1.000	+/-0.010	1.001	✓		Vern	
4.00	+/-0.030	4.000	✓		"	
1.00	+/-0.030	1.000	✓		H.G.	
1.38	+/-0.030	1.380	✓		Vern	
1.875	+/-0.010	1.875	✓		H.G.	
2.125	+/-0.010	2.124	✓		H.G.	
2.88	+/-0.030	2.880	✓		Vern	
3.31	+/-0.030	3.312	✓		Vern	
R0.375	+/-0.010	.375	✓		R.D.	
R0.50	+/-0.030	.500	✓		R.D.	
Ø0.191	+0.005/-0.001	.193	✓		P.G.	
R0.25	+/-0.030	.250	✓		R.D.	
R0.375	+/-0.010	.375	✓		"	
R0.38	+/-0.030	.380	✓		"	
12.00	+/-0.030	12.000	✓		H.G.	
9.000	+/-0.010	8.999	✓		H.G.	
7.50	+/-0.030	7.505	✓		Vern.	
4.50	+/-0.030	4.510	✓		Vern.	
2.88	+/-0.030	2.875	✓		H.G.	
2.250	+/-0.010	2.252	✓		H.G.	
1.000	+/-0.010	1.001	✓		Vern	
0.50	+/-0.030	.500	✓		Vern	

Measured by: SBZ/ano	Checked by: [Signature]	QC Inspector:
Date: 18/04/11	Date: 18/04/11	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	09.04.05	New Issue P/O D3179-041	KJ/DD	
B	12.10.04	Dimension 0.750 was 1.750	KJ	
C	13.05.27	Dimensions revised per Dwg Rev D	KJ	
D	16.06.08	Dimensions revised per Dwg Rev E	KJ	
E	17.02.16	Dimensions rearranged	KJ	[Signature]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					